

OPT WORKBOOK



A printable
workbook to
complement
your study



A NOTE ABOUT THIS WORKBOOK

This short workbook accompanies the Acute and Emergency Eye Care OPT regional study day on the 25th of June 2021. You can use it to focus your reading and study prior to the study day, or to consolidate what you have learned afterwards to aid your future practice. The lecture material and workbook have both been designed with the Royal College of Ophthalmologists' OPT curriculum in mind.

During the study day we will be covering topics including the anatomy and physiology of eye movements and strabismus, the causes of double vision that might be seen in the emergency eye setting as well as an introduction to the clinical assessment of patients who present with double vision.

The second part of the day will include small group discussions centred on some real-life clinical cases, so that you can see how the knowledge you have gained from the earlier presentations is put into practice. We hope that this workbook will serve as a useful learning aid, encouraging reflection and facilitating your learning on this important subject.

Links to the teaching presentations, as well as those from previous study days, will appear on the HEEoE OPT website at the following address:

<https://heeeo.e.hee.nhs.uk/ophthalmology/ophthalmology-home/ophthalmic-practitioner-training>

We very much hope you enjoy the presentations.

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STUDY DAY

OVERVIEW OF PRESENTATIONS



INSTRUCTIONS: Each topic below covers key elements of the OPT curriculum. Lecture headings are provided as a guide to direct your learning. If you feel you have a good understanding of each topic then you can tick that box and move onwards, otherwise you can flag it to return to later and revise.

SECTION 1 PRECLINICAL

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ANATOMY & PHYSIOLOGY OF EYE MOVEMENT

SECTION 2 CLINICAL ASSESSMENT

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TAKING A HISTORY ABOUT DOUBLE VISION

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EXAMINING THE PATIENT WITH DOUBLE VISION

SECTION 3 CAUSES OF DOUBLE VISION

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CRANIAL NERVE PALSIES

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NON-NEUROLOGICAL CAUSES OF DIPLOPIA

☐

WORKSHOP NOTES

SECTION ONE

PRECLINICAL

SECTION INTRODUCTION

How is it that most of us perceive the world around us as a single, rather than a double image, when we have two eyes viewing our environment from different perspectives?



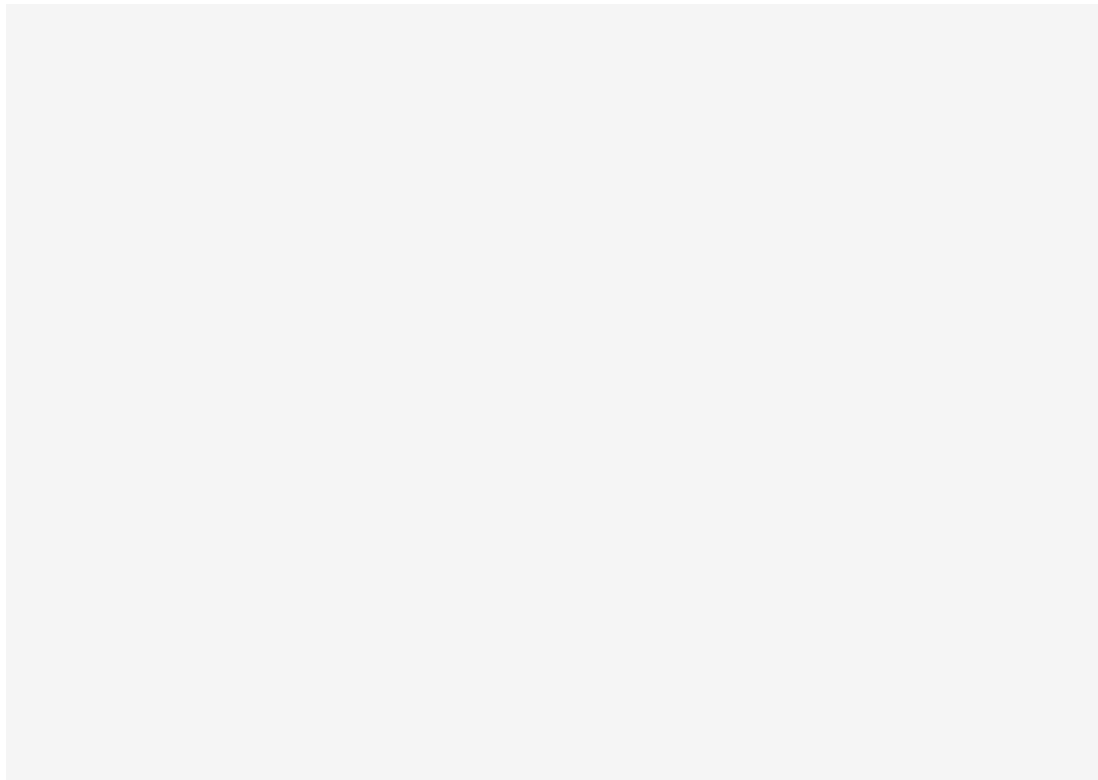
We will discuss the anatomical components and physiological mechanisms that underlie our ocular motility system and which may be vulnerable to a number of disease processes, which we will explore in future sections.



ANATOMY & PHYSIOLOGY

SILVANA MADI

Why is it important that the movements of our two eyes are coordinated?





ANATOMY & PHYSIOLOGY

SILVANA MADI

**Our eye movements rely on six different muscles.
Can you name them?**

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**These six muscles are controlled by three cranial nerves.
Can you name these three nerves and match each to the muscles it supplies?**

A large, empty rectangular box with a light gray background, intended for the user to write the names of the three cranial nerves.A medium-sized, empty rectangular box with a light gray background, intended for the user to write the muscles supplied by the first cranial nerve.A medium-sized, empty rectangular box with a light gray background, intended for the user to write the muscles supplied by the second cranial nerve.



ANATOMY & PHYSIOLOGY

SILVANA MADI

**Can you define the following terms, which describe different eye movements?
Which is the principal muscle responsible for each movement?**

abduction

adduction

elevation

depression

intorsion

extorsion

SECTION TWO

ASSESSMENT

SECTION INTRODUCTION

When a patient presents to Ophthalmology with new onset double vision, how do we assess and diagnose their underlying condition? How do we distinguish serious, even life-threatening causes from less urgent pathology?



We will be covering aspects of the clinical assessment of patients with diplopia, including what questions to ask about double vision, what associated features and 'red flags' to look out for, and how to use the cover test and eye movement examination to hone in on the cause of the patient's symptoms.



TAKING A HISTORY

SHAZIA MIRZA

Scenario: A GP calls the Emergency Clinic to refer a patient who is complaining of double vision. **What questions can you ask about the double vision to better understand the patient's symptoms and to start to assess the likely cause?**

What 'red flag' features relating to double vision may indicate a serious or life-threatening cause?



TAKING A HISTORY

SHAZIA MIRZA

What underlying risk factors in the patient's medical history might be suggestive of a possible 'microvascular' cause?

Why are these other aspects of the medical history potentially relevant here?

Past ophthalmic history

Drug history

Family history

Social history



EXAMINATION

NARMAN PUVANACHANDRA

Why might a patient with double vision adopt a 'corrective head posture'?

What is the purpose of the cover test and alternating cover test?



EXAMINATION

NARMAN PUVANACHANDRA

Can you explain the difference between:

manifest vs latent squint?

comitant vs incomitant squint?

versions vs ductions?

SECTION THREE

CLINICAL

SECTION INTRODUCTION

There is a long list of conditions that can result in a person experiencing double vision. These range from the common and relatively innocuous (though potentially functionally disabling) causes to more serious emergencies.



We will be exploring a range of common or important neurological, vascular and inflammatory conditions that may result in double vision, as well as their clinical features, necessary investigations and possible management strategies.



CRANIAL NERVE PALSIES

VERNON GEH

Scenario: A patient is seen in the orthoptic department with recent onset double vision. She is confirmed to have a sixth nerve palsy. **What symptoms is she likely to complain of?**

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Name at least 3 causes of a sixth nerve palsy

A large, empty rectangular box with a light gray background, intended for the user to list at least three causes of a sixth nerve palsy.



CRANIAL NERVE PALSIES

VERNON GEH

What features would you expect to find on examination of a patient with a right third nerve palsy?

Why is the appearance of the patient's pupil important in this situation?



CRANIAL NERVE PALSIES

VERNON GEH

Scenario: An elderly Caucasian lady presents with a history of transient double vision lasting an hour which has now resolved. She has a headache and her past medical history includes polymyalgia rheumatica. **What important differential diagnosis should you consider here? What other symptoms might she experience and what further investigations would you request?**

Scenario: A 63-year old obese gentleman with poorly controlled diabetes reports a 1 week history of horizontal double vision. His symptoms have started to improve spontaneously in the last 48 hours. **What is the likely cause? How would you manage this patient?**



NON-NEUROLOGICAL CAUSES OF DIPLOPIA

CARL SVASTI-SALEE

What is meant by 'monocular diplopia'? How would you demonstrate this?

Scenario: A patient reports having been assaulted and sustaining a punch to the face. He has now got double vision. **What features would make you suspicious of an orbital floor fracture?**



NON-NEUROLOGICAL CAUSES OF DIPLOPIA

CARL SVASTI-SALEE

What is meant by 'proptosis'? How is it measured?

What features might you see in a patient with orbital inflammation or infection?

How would you assess for fatiguability of eye muscles? What might this indicate?



WORKSHEET



WORKSHEET